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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,729	12/14/2001	Xiaoru Wang	83067SMR	5473

7590 03/19/2004

Paul A. Leipold
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER	
SHOSHO, CALLIE E	

ART UNIT	PAPER NUMBER
1714	

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/017,729	WANG ET AL.
	Examiner	Art Unit
	Callie E. Shosho	1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-27* is/are rejected.

7)☒ Claim(s) *3* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 12/24/03.

New grounds of rejection are set forth below with respect to JP 04185672 due to the use of an English translation of the Japanese reference which was previously unavailable and thus, the following action is non-final.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 4-6, 9-10, 13-16, and 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 04185672.

Using English translation provided by applicants, it is noted that JP 04185672 discloses ink jet ink comprising water, humectant, stabilizer such as polyvinyl alcohol or resinous polymer, and colored resin, i.e. composite polymer-dye particles, which comprises 0.1-20% water-insoluble dye including anthraquinone dye and azo dye and 80-99.9% resin wherein the colored resin has particle size of 0.05-5 μm (pages 6-8 page 9, lines 1-4, and page 10, lines 3-7, and Application example 1).

There is no disclosure that the dye is present during polymerization of the polymer to form the composite polymer-dye particles or any disclosure of the specifically claimed process for making the polymer-dye particles as required in the present claims. However, it is noted that

"even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself". See MPEP 2113.

Thus, although there is no disclosure in JP 04185672 of the specific presently claimed process for making the polymer-dye particles, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process for making the polymer-dye particles and given that JP 04185672 meets the requirements of the claimed polymer-dye particles, it is clear that JP 04185672 meets the limitation of the present claims.

In light of the above, it is clear that JP 04185672 anticipates the present claims.

4. Claims 1-2, 4-6, 9-10, and 13-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimomura et al. (U.S. 5,837,754) taken in view of the evidence in Helbrecht et al. (U.S. 5,302,195).

Shimomura et al. disclose ink jet ink comprising water, humectant, polymeric stabilizer, and colored polyester, i.e. composite polymer-dye particles, which comprises 2-20% water-insoluble dye and 80-98% polyester which can be crosslinked. The colored polyester has particle size of 0.1-1 μm (col.4, lines 45-47, col.9, lines 32-48, 56-59, and 66-67, col.10, lines 12-37, and col.12, lines 41-44).

The dyes include Solvent Black 3 which is well known, as evidenced Helbrecht et al. (col.4, lines 44-45), as an azo dye.

There is no disclosure that the dye is present during polymerization of the polymer or any disclosure of the specifically claimed process for making the polymer-dye particles as required in the present claims. However, it is noted that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself". See MPEP 2113.

Thus, although there is no disclosure in Shimomura et al. of the specific presently claimed process for making the polymer-dye particles, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process for making the polymer-dye particles and given that Shimomura et al. meet the requirements of the claimed polymer-dye particles, it is clear that Shimomura et al. meets the limitation of the present claims.

In light of the above, it is clear that Shimomura et al. anticipate the present claims.

5. Claims 1-2, 4, 9-12, 14-16, 19, and 22-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishizuka et al. (U.S. 2001/0023267).

Ishizuka et al. disclose inkjet ink comprising water, humectant, stabilizer, and colored resin, i.e. composite polymer-dye particles, that has particle size of 1-500 nm and comprises water-insoluble dye and resin which has molecular weight of 1,000-100,000. There is also disclosed an ink jet printing process wherein the above ink is loaded into ink jet printer and the printed onto substrate comprising ink receiving layer to produce image (paragraphs 43, 50-51, 110-111, 244, 247, 250, 265, 335, 337, 339, 349, 371, and 407).

There is no disclosure that the dye is present during polymerization of the polymer or any disclosure of the specifically claimed process for making the polymer-dye particles as required in the present claims. However, it is noted that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself". See MPEP 2113.

Thus, although there is no disclosure in Ishizuka et al. of the specific presently claimed process for making the polymer-dye particles, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the

product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process for making the polymer-dye particles and given that Ishizuka et al. meet the requirements of the claimed polymer-dye particles, it is clear that Ishizuka et al. meet the limitation of the present claims.

In light of the above, it is clear that Ishizuka et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 04185672 or Shimomura et al. (U.S. 5,837,754) either of which in view of Moore et al. (U.S. 4,698,651).

The disclosures with respect to JP 04185672 and Shimomura et al. in paragraphs 3 and 4, respectively, are incorporated here by reference.

The difference between JP 04185672 or Shimomura et al. and the present claimed invention is the requirement in the claims of specific type of dye.

Moore et al. disclose the use of arylazoisothiazole dye in order to improve light stability and hue (col.1, line 65-col.2, line 15).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to sue such dye in the ink of either JP 04185672 or Shimomura et al. in order to improve light stability and hue, and thereby arrive at the claimed invention.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 04185672 or Shimomura et al. (U.S. 5,837,754) either of which in view of Evans et al. (U.S. 6,001,161).

The disclosures with respect to JP 04185672 and Shimomura et al. in paragraphs 3 and 4, respectively, are incorporated here by reference.

The difference between JP 04185672 or Shimomura et al. and the present claimed invention is the requirement in the claims of specific type of dye.

Evans et al., which is drawn to ink jet ink, disclose the use of dye which is metal complex of 8-heterocyclcylazo-5-hydroxyquinoline in order to produce ink with outstanding light stability and bright magenta hue (col.2, lines 17-24).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to sue such dye in the ink of JP 04185672 or Shimomura et al. in order to produce ink with outstanding light stability and bright magenta hue, and thereby arrive at the claimed invention.

Response to Arguments

9. Applicants' arguments regarding Tsutsumi et al. (U.S. 6,031,019) and EP 1006161 have been fully considered but they are moot in view of the discontinuation of the use of these references against the present claims.

10. Applicants' arguments filed 12/24/03 have been fully considered but, with the exception of arguments relating to Tsutsumi et al. and EP 1006161, they are not persuasive.

Specifically, applicants argue that:

(a) none of the cited references, i.e. JP 04185672, Shimomura et al. or Ishizuka et al., disclose process for making composite polymer-dye particles as presently claimed.

(b) There is no disclosure of co-stabilizer in JP 04185672.

(c) The co-stabilizer of Shimomura et al. is not associated with polymer-dye particles as required in the present claims.

(d) There is no disclosure of stabilizer or co-stabilizer in Ishizuka et al.

With respect to argument (a), applicants argue that the cited references each disclose composite polymer-dye particles made by different process than presently claimed. Specifically, each reference discloses dye loading a preformed polymer while the present claims require polymerizing unsaturated monomer in the presence of dye.

It is agreed that each of JP 04185672, Shimomura et al. and Ishizuka et al. disclose adding dye to preformed polymer in order to form the composite polymer-dye particles as

opposed to polymerizing unsaturated monomer in the presence of dye as required in the present claims.

However, as set forth in paragraphs 3-5 above, although there is no disclosure in JP 04185672, Shimomura et al. or Ishizuka et al. of the specific presently claimed process for making the polymer-dye particles, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process for making the polymer-dye particles and given that the cited references meet the requirements of the claimed polymer-dye particles, it is clear that JP 04185672, Shimomura et al. or Ishizuka et al. each meet the limitation of the present claims.

Page 7 of the amendment filed 12/24/03 states that the difference between the presently claimed process (polymerizing monomer in the presence of dye) and that disclosed by each of JP 04185672, Shimomura et al. and Ishizuka et al. (adding dye to preformed polymer) is that the dye loaded polymers have poor colloidal stability due to the diffusion of dye into the polymer and that more dye is associated with the polymer in the present invention. However, it is noted

that "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that the arguments provided by the applicant regarding the difference between the presently claimed process and that disclosed by each of JP 04185672, Shimomura et al. and Ishizuka et al. must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001".

With respect to argument (b), applicants argue that the additives disclosed on page 8 of the English translation of JP 04185672 are not co-stabilizers but rather just additional surfactants.

However, it is noted that page 8, third full paragraph, of JP 04185672 discloses that the polymeric dispersion stabilizers are used "in addition to" the surfactants. Given that JP 04185672 discloses the use of surfactant, i.e. stabilizer, and polymeric dispersion stabilizers in addition to the surfactant, it is not clear why the polymeric dispersion stabilizers are not co-stabilizers. Clarification is requested.

With respect to argument (c), applicants argue that the stabilizers of Shimomura et al. are added after preparation of colored particles which is in contrast to the present invention wherein the co-stabilizer is present during the formation of the polymer-dye particles and thus, in Shimomura et al., the co-stabilizer would not remain in association with the polymer-dye particles as in the present invention.

However, the present claims are drawn to ink, not process of making ink or process of making polymer-dye particles. There is no requirement in the present claims when the co-stabilizer is added to the ink. While applicants argue that co-stabilizer would not be associated with polymer-dye particles, there is no evidence to support this position. Given that Shimomura et al. disclose co-stabilizer, i.e. dispersion stabilizing agent, it is clear that such stabilizer would remain associated with the polymer-dye particles of Shimomura et al. in order to perform its function, i.e. maintain stable dispersion. It is not clear why applicants argue that the co-stabilizer of Shimomura et al. is not associated with the colored polyester or polymer-dye particles. Clarification is requested.

With respect to argument (d), applicants argue that there is no disclosure in Ishizuka et al. of stabilizer or co-stabilizer. However, it is noted that paragraphs 334 and 335 of Ishizuka et al. disclose the use of dispersant, i.e. stabilizer, and dispersion stabilizer, i.e. co-stabilizer.

Allowable Subject Matter

11. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 3 would be allowable if rewritten in independent form as described above given that there is no disclosure in the "closest" prior art, namely, JP 04185672, Shimomura et al. (U.S. 5,837,754), or Ishizuka et al. (U.S. 2001/0023267), of co-stabilizer that is hexadecane, cetyl alcohol, or steric hydrophobic stabilizer.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
3/12/04